

Increased Muscle Spasticity After Traumatic Brain Injury

Source: Ask The Expert – Produced by Victoria Tilney McDonough and Brian King

Video Link: <http://www.brainline.org/content/multimedia.php?id=2413>

Question

I'm a case manager and have gotten questions from patients and their families about TBI and spasticity — like how often is spasticity a problem and how is it best to treat spasticity that follows a TBI? I haven't been able to find any definitive research. Any ideas?

Answer

Dr. Brian Greenwald: Before we talk about the treatment for spasticity, I think we should talk about what is spasticity. So, after a central nervous system injury — an injury to either the brain or the spinal cord, we see ... it is not unusual to see an increase in resistance of the muscles as you try to move them. The severity of this problem can be from mild to severe, and the treatment of it also varies depending on the severity of the problem. The problem can be seen in actually any of the muscles throughout the body starting with the tongue straight down to the ankles and feet. Looking at the treatment of the problem will depend on where the problem is and the severity of the problem.

There's a variety of treatments that you can use for spasticity. I generally ... treatment is started by doing range-of-motion and stretching and bracing. Those are usually the early treatments for spasticity. If that's not effective, there are number of medications that can be used. Medications are generally helpful for mild to moderate spasticity and often not as effective for more severe spasticity. The more severe spasticity — botulinum toxin injections can be useful, and in even more severe spasticity from there, baclofen pumps are sometimes considered, where actually a pump is implanted into the person that sends baclofen — a spasticity medication, a fluid — into their spine itself to help relax the muscles. After traumatic brain injury, spasticity is found in about 25 percent of the patients early on, and about ten percent of the patients later on in the community.

Early on, people who have spasticity, it can be a transient thing that we see in patients after brain injury and spasticity plays a small role later on. There are a group of patients, as I was saying, about ten percent of patients, who have ongoing needs for treatment of their spasticity, and usually it's a combination of physical therapy techniques, stretching, injections, medications, and sometimes there's the baclofen pump that we talked about in more severe cases.